



Service Priorities and Programmes
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Effectiveness of Brief Pulmonary Rehabilitation Programme (bPRP) in Primary Care Setting - for Patients with Known and Newly Diagnosed Chronic Obstructive Pulmonary Disease

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Introduction

In September 2009, Nurse and Allied Health Clinic – Respiratory Disease Management Programme (NAHC-RESP) was launched in NTEC. This programme aimed to make early detection for people with chronic obstructive pulmonary disease (COPD) and provide interventions to manage their respiratory symptoms in primary care setting. For patients diagnosed with COPD in NAHC-RESP, a 6-session bPRP would be provided. The content of bPRP consisted of patient education on pathology, puff technique, dyspnea management, lifestyle re-design and exercise prescription.

Objectives

1. To evaluate the effectiveness of bPRP for COPD patients
2. To investigate any difference in the effect between patients with known COPD and newly diagnosed COPD joining bPRP

Methodology

Patients diagnosed with COPD in NAHC-RESP were recruited into bPRP for training. Effect of bPRP was measured by COPD Assessment Test (CAT), Shortness of Breath Questionnaire (SOBQ), 6-minute walk distance (6MWD) and St. George's Respiratory Questionnaire (SGRQ). Outcomes were assessed at 4 points: initial assessment, immediate after bPRP (post-PRP), 6-month and 12-month review after bPRP.

Result

From September 2009 to December 2015, 669 COPD patients completed bPRP were included for analyses. One-way repeated measure ANOVA was conducted to investigate the effects of bPRP over time. Significant differences ($p < 0.01$) were found in CAT, SOBQ, 6MWD and SGRQ. Post-hoc tests with Bonferroni Correction showed

that the scores of CAT, 6MWD and SGRQ were improved at post-PRP, 6-month and 12-month review when compared to initial assessment. For SOBQ, significant difference was found between initial assessment and 12-month review. Results demonstrated bPRP was effective in improving respiratory symptoms, exercise capacity and quality of life (QoL) in COPD patients.

Two-way repeated measure ANOVA was used in comparing the effect between patient groups with known COPD and newly diagnosed COPD. Interaction effects between time and COPD groups on CAT ($p < 0.05$), SOBQ ($p < 0.05$) and SRGQ ($p < 0.01$) were found. At baseline assessment, known COPD patients scored higher in CAT, SOBQ and SGRQ (independent t-test, $p < 0.001$). The results indicated that known COPD patients with more respiratory symptoms and poorer QoL at baseline, benefited more from bPRP.